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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,493	01/12/2004	Gregor Boehne	KOA 0244 PUS (R 1421)	1984
22045	7590	05/21/2004	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			LEE, PATRICK J	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/755,493

Applicant(s)

BOEHNE, GREGOR

Examiner

Patrick J. Lee

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-7,9-11 and 13 is/are rejected.
7) ☒ Claim(s) 2,8 and 12 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0104.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities:

In line 25 of page 7, "firs" should read "first".

Appropriate correction is required.

Information Disclosure Statement

3. The information disclosure statement filed January 12th, 2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because foreign references have not been provided with translations. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5-7, 11, & 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Matzen et al 3,668,407.

Matzen et al disclose an optical switch for a keyboard comprising light sources (24-36, 70, 102), light detectors (10-22, 72, 100), key (60), and an optically coded member (52, 152).

With respect to claims 1, 7, & 13, Matzen et al disclose light detectors (10-22, 72, 100) as a plurality of light receivers, light sources (24-36, 70, 102) for exposing the receivers to light, an optically coded member (52, 152) as a shutter coupled to the movement of a key (60) as a switch element. The optically coded member (52, 152) causes the change of light received by receivers (10-22, 72, 100) through holes (66, 68, 116, 118) incorporated into the optically coded member (52, 152).

With respect to claims 5 & 11, Matzen et al disclose interface (74) as a binary decoding circuit to generate an output signal based on the state of receivers (10-22, 72, 100).

With respect to claim 6, light receivers (10-22, 72, 100) form a light sensor array.

6. Claims 1, 3, 5-7, 9, 11, & 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagiuda et al 5,371,359.

Hagiuda et al disclose an optical switch for underwater applications. The switch comprises light sources (L1, L2), photodiodes (PD1, PD2, PD3, PD4), reflection plate (1), and waterproof case (2).

With respect to claims 1, 7, & 13, Hagiuda et al disclose photodiodes (PD1, PD2, PD3, PD4) as a plurality of photoelectric receivers, light sources (L1, L2), and a reflection plate (1) as a shutter coupled to the movement of slidable actuation means (1d) as a switch element. The movement of reflection plate (1) means that one receiver may change from receiving a lighter light and a darker light (which would result in a shaded state) (see column 2, lines 39-47).

With respect to claims 3 & 9, Hagiuda et al disclose slidable actuation means (1d) as a curved part of reflection plate (1) as a shutter.

With respect to claims 5 & 11, Hagiuda et al disclose comparator (U1), latch (U2), and gate (U3) to comprise a binary decoding circuit for generating an output signal based on the signals provided by the photodiodes (PD1-PD4).

With respect to claim 6, light receivers (PD1-PD4) form a light sensor array.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiuda et al 5,371,359 in view of Kirby 6,495,832 B1.

Hagiuda et al disclose the system as described in the discussion of claims 1, 5-7, 11, & 13.

With respect to claims 4 & 10, Hagiuda et al does not disclose the use of an infrared source and infrared receivers with filters. However, such is known and disclosed by Kirby. Kirby discloses a position sensing apparatus utilizing a photosensor array (9) and an infrared light source array (8). It would have been obvious to modify the teachings of Hagiuda et al with those of Kirby in order to use infrared sources as such would allow the device taught by Hagiuda et al to be used in direct sunlight or other photoelectric saturation conditions (see Kirby abstract).

Allowable Subject Matter

9. Claims 2, 8, & 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 2 & 8, Hagiuda et al do not disclose nor suggest the second plurality of receivers coupled with a second shutter. Yamamoto et al 3,628,037 in a photoelectric switch device disclose the use of extra shutters (27a-27d) to interpose between light source (12), and light receivers (13a-13d), but do not disclose the second shutter to be coupled to the movement of the switch element and do not disclose the plurality of photoelectric receivers arranged in the way detailed in claims 1, 7, & 13. As a result, claims 2 & 8 and dependent claim 12 are objected.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (571) 272-2440. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J. Lee
Examiner
Art Unit 2878

PJL
May 5th, 2004


Stephane B. Allen
Primary Examiner